CHRISTMAS TREE SHAPED ARTIFICIAL TREE

This application claims the benefit of 60/399,144, filed July 30, 2002.

BACKGROUND - FIELD OF INVENTION

This invention relates to a Christmas tree comprising a pole for a trunk and strings of lights.

BACKGROUND - DESCRIPTION OF PRIOR ART

Over the years a number of trees have been developed using a pole for the trunk with light strings attached to the top of the pole and extended downwardly and outwardly to the ground to form a conical shape which simulates that of a Christmas tree. Some inventors have used strings of lights in the shape of tree branches such as shown in U.S. Pat. No. 2,289,680 to Prettyman (1942). U.S. Pat. No. 3,704,366 to Korb et al (1972) discloses a system having horizontal spreaders radiating from a trunk pole. U.S. Pat. No. 5,712,002 to Reilly, 111 (1998) discloses a system having a telescopic trunk pole.

OBJECTS AND ADVANTAGES

Several of the many objects and advantages of the present invention are:

(1) to provide an artificial Christmas tree having a trunk pole that can be erected to its vertical position without the light strings being attached.

(2) to provide an artificial Christmas tree having 3 or more guy wires anchored to the ground for holding the pole in a vertical position.

(3) to provide an artificial Christmas tree having a system for rotatably connecting the guy wires to the top of the pole and for mounting the lower end of the pole on a rotatably designed base for those trees required to be rotated.

(4) to provide an artificial Christmas tree having a system for hoisting and lowering the light strings.

(5) to provide an artificial Christmas tree having a segmented trunk pole if desired.

(6) to provide an artificial Christmas tree having light strings suspended to form a tree branch shape.

DRAWING FIGURES

In the drawings, closely related figures may have the same number but different alphabetic suffixes.

FIG. 1 shows in an elevation view the tree mounted on a rotating base device and two guy wires attached to screw anchors in the ground.

FIG. 2 shows the tree of the previous Fig. in a smaller scale with encircled areas which are exploded in subsequent Figs.

FIG. 3 shows the top of the tree pole with the guy wire assembly and sleeve lifting system.

FIG. 4 shows the pole splice connection.

FIG. 5 shows the hoisting lines exiting the pole and a cleat for tying them off.

FIG. 6 shows a sleeve assembly.

FIG. 7 shows the combination spreader and light string sleeve.

FIG. 8 shows the combination profile disc and light string sleeve.

FIG. 9 shows the light string atached to the profile cable.

FIG. 10 shows the outer end of a spreader and the attached light string and profile cable.

FIG. 11, 12 and 13 show in plan view light socket disc.

FIG. 14 shows the spreader hub.

FIG. 15 shows the profile cable disc.

FIG. 16 shows in plan view the tree.

REFERENCE NUMERALS IN DRAWINGS

10 tree	20 mounting surface
30 trunk pole and hoisting system	40 guy wire system
50 - 70 pole sleeves	80 profile cables
90 light strings	100 star

SUMMARY

In accordance with the present invention the tree comprises a trunk pole, guy wires, profile cables, light strings and a hoisting system for raising and lowering the light strings.

DISCLOSURE

A typical embodiment **10** of the tree of the present invention is illustrated in FIG. **1** and **2** mounted on a horizontal surface **20** and secured in a vertical position with guy wires **44** attached to screw anchors **24**. If it is desired for the tree to rotate, trunk pole **30** would be placed on a rotating device **22**. When the trunk pole **30** comprises two or more sections, a cylindrical, tubular connector **31** FIG. **4** must be inserted in the ID of the pole leaving the OD smooth so light socket sleeves **50** and **54** ~~(FIG. 6)~~ (FIG. 3 and FIG. 6) are free to be hoisted and lowered by lines **34**. The top of pole **30** in FIG. **3** comprises an axle **33** which can rotate in bearing **40** and a sheave assembly **32** for hoisting lines **34**. Disc **52** (FIG. 11) is attached to sleeve **50** and to lines **34**. The upper ends of the light strings **90** and the upper ends of the profile cables **80** terminate at light socket disc **52**. **100** represents an optional star.

In FIG. **5** hoisting lines **34** are shown exiting slot **35**. This slot is located at a height convenient for hoisting and lowering the light strings **90**. They can be tied off on cleat **36**.

In FIG. **6** one of the intermediate light socket sleeves **54** is shown with light string **90** attached to light socket disc **56**. Hoisting lines **34** are connected to the sleeves at the vertical interval necessary for the desired tree branch shape to be formed. Sleeve **58** (FIG. 7) and sleeve **66** (FIG. 8) are not connected to the hoisting lines and are demountably fixed to trunk pole **30**.

In FIG. **7** spreader hub **62** is shown as part of sleeve **58** with spreaders **64** connected. A light socket disc **56** is also a part of this sleeve.

In FIG. **8** profile cable disc **70** is shown as part of sleeve **66** with profile cables **80** connected. A light socket disc **68** is also a part of this sleeve.

In FIG. **9** light string **90** is shown attached to profile cable **80** with connector **92**. Stops **82** keep connector **92** from riding up and down the profile cable.

In FIG. **10** the outer end of spreader **64** is shown with profile cable **80** and light string **90** attached to it. Notch **65** is provided for attaching optional parameter cord **64A** (FIG. 16). The cord adds to the overall structural integrity during strong winds.

In FIG. **11** light socket disc **52** is shown in plan view as part of sleeve **50** with orifice **34A** for receiving hoisting lines **34**, orifice **80A** for receiving profile cables **80** and notch **90A** for receiving light strings with rectangular shaped light sockets.

FIG. **12** shows light socket disc **56** which is similar to disc **52** minus orifice **80A** and with notch **90B** for receiving light strings with circular shaped light sockets.

FIG. **13** shows light socket disc **60** which is similar to disc **56** minus orifice **34A**.

FIG. **14** shows spreader hub **62** to which spreaders **64** are connected.

FIG. **15** shows profile cable disc **70** to which profile cables **80** are connected.

FIG. **16** shows in plan view a typical embodiment with an eight spreader **64** design and optional parameter cord **64A**.

SUMMARY, RAMIFICATIONS, AND SCOPE

Accordingly, the reader will see that the tree of this invention can be easily installed, that it can be economically produced and marketed. When made of aluminum it is light weight for shipping and can be anodized for long life. Since it can be supported with a minimum of three guy wires, underlying grass can be more easily maintained than those similar to Reilly's, U.S. Pat. No. 5,712,002. Furthermore, by being able to raise and lower the light strings easily, an owner does not have to hesitate replacing a single light bulb. If the rotating feature is desired later, the tree can easily be placed on the optional rotating system.

Although the description above contains many specifications, these should not be construed as limiting the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this invention. For example, the sleeves and light socket disc could be molded as a single unit, the spreader hub could be an extrusion, etc.

Thus the scope of the invention should be determined by the appended claims and their legal equivalents, rather than by the examples given.